

Soybean Seed Quality Considerations

SITUATION

It looks like this planting season is going to start off with saturated conditions, and cooler weather. But as some point warmer weather will be on the horizon, and we will get into the field and start planting. Because of these wet conditions, it is especially important that we be fully aware of the risk of crop disease we might be facing.

FACTORS TO CONSIDER

Last year, the fall harvest conditions were poor, and a lot of fungal growth happened on the seed. Anytime there is fungi on the seed, the seed starts to deteriorate as the fungi starts feeding on the seed. Less than optimum germination scores are wide spread across the entire industry this year especially on soybeans grown in the Midwest during the 2018 season.



- **Lower germination:** Phomopsis-infected seed will have a lower probability of germination when planted. Diminished seed quality and reduced seed vigor, germination and emergence are all consequences of seed decay. Seed decay can also reduce seed test weight and oil content.
- **Low visual appearing seed:** Seed decay is characterized by cracked, shriveled seed with white chalk-colored mold on the seed surface. Other visual observations that may be seen this year are obvious discoloration of the seed, some green seed, some darker seed. The seed is simply not very eye-appealing this year.
- **Adjusting seeding rate:** Depending on the germination scores it may be necessary to adjust seeding rate to account for lower germination.



- **Spring soil conditions:**
 - Soil conditions are wetter and cooler than normal, this could drastically impact both the survival and stand count of plants.
 - Compacted soils from last fall and possibly early season planting, may expose soybean seed to seedling disease, such as Phytophthora root and stem rot and Pythium seedling blight. With wet soils conditions, even high-quality seed is at risk for infection by these pathogens.

ACTION PLAN

According to past Iowa State University research, appropriate seed treatments can increase germination rates. Given the progress and development of fungicides, germination rates could be further improved, given the right mix. Growers should check soybean bag tags carefully for germination percentages, calculate seeding rates appropriately and pick the right fungicide seed treatments in the spring.

We recommend using Legend Seeds YP Pro Soybean Treatment to help improve germination rates and to protect the seed from other early season soil-borne diseases. YP Pro: Soybeans and YP Basic: Soybeans have THREE modes of action to help deliver a healthy stand in the spring. Learn more at: <https://legendseeds.net/products/seed-treatments>

SUMMARY

Many growers will want to have their seed treated with a fungicide to increase the chances of germination and prevent seedling diseases. Also consider adjusting planting population on low-germination seed to ensure reaching the desired final stand. Contact your Legend Account Manager or Legend Sales Agronomist for additional information on the protection offered by YP seed treatments.

RESOURCES

<https://crops.extension.iastate.edu/cropnews/2018/12/should-you-use-fungicidal-seed-treatment-low-quality-soybean-seed>

<https://www.dtnpf.com/agriculture/web/ag/news/crops/article/2018/12/06/lower-soybean-seed-germination-2019>



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